

ABSTRACT OF THE DISCLOSURE

This invention provides a method for fabricating geometrical diamond/matrix composites where all or a part of surfaces of the matrix are covered with a diamond film, and to fabricate hollow diamond shells using the composites where a part is uncoated with a diamond film. Hollow diamond shells were prepared by etching out of the matrix soluble with chemicals through an opening, a zone on the matrix, uncoated with diamond film. By changing the shape and the size of the geometrical matrixes, various kinds of diamond/matrix composites and diamond shells in shape and in size can be fabricated. The sizes available are between 200 nm and 2 mm.